

REMARKS/ARGUMENTS

Claims 1, 2, 6-9, 14-18 and 26-29 remain in the application. Claim 5 has been cancelled. Claims 3, 4, and 10-13 have been withdrawn as a result of an earlier restriction requirement.

§ 112 Rejections

Claims 1, 2, 6-9, 14-18 and 26-29 currently stand rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention due to the inclusion in claims 1 and 26 of the phrase “such as silicon.” Claims 1 and 26 have been amended herein to delete this phrase. Accordingly, claims 1, 2, 6-9, 14-18 and 26-29 are believed to be acceptable under section 112.

§ 103 Rejections

Claims 1, 2, 6-9, 14-18 and 26-29 currently stand rejected under 35 USC 103(a) as being unpatentable over Ghosh et al (US 5,993,750) in view of Burdon et al (WO00/21659) and Stiles et al (US3,518,206).

Claims 1 and 26 have been amended herein to recite that the “two or more planar substrates” are “two or more planar non-frit substrates” so that the claims more clearly recite the features that provide the advantages discussed in the previous response.

Although the term “non-frit” is not used in the specification as filed, introduction of this term into the claims is believed not to constitute new matter. Support is found generally in the description and figures of the application as filed, and particularly in the specification at [0049], for example. In paragraph [0049] is state that

[t]he use of substrates made of glass, glass ceramic, ceramic, metal, or semiconductor is particularly advantageous in that, sub-structures can be formed easily without the need to produce and handle such sub-structures

in a self-supporting configuration, which would be fragile. The structures do not sag or become distorted, thus making it possible to provide channel walls that are far apart and/or wall shapes that are complex, and it is easy to introduce additional parts such as electrical conductors, electrodes, or light conductors on the substrates with the mechanical behavior of the parts being minimally affected and in many cases, unaffected.

This description text points out how sintering the frit mixture on the substrate provides needed support for the frit structures ("sub-structure(s)"). One of ordinary skill in the art would have understood this, at the time of the filing of the application, as disclosing that the substrates themselves are non-frit structures. This understanding would also come from the figures in the application as filed, particularly FIG. 7, where the frit is represented as a particulate material (with stippling in the cross-sectional views) while the substrate(s) are represented as solid (with diagonal hashing in the cross-sectional views). If the Examiner finds it is needed and appropriate, an amendment to the specification could also be made to make the non-frit nature of the substrates more explicit, although no amendment is proposed herein.

The art of record does not disclose the invention as claimed in amended claims 1 and 26, and in particular does not provide the inherent advantages of the claimed structure having non-frit substrates with frit-based wall structures therebetween, particularly the advantages that lie in its suitability and adaptability to a robust, reliable manufacturing process that allows formation of large open areas (channel walls that are far apart, as mentioned in paragraph [0049]) and high aspect-ratio features (such as mentioned in paragraph [0052]). The dependent claims all depend, directly, or indirectly from claim 1 or claim 26, and are believed allowable for at least this same reason.

Based upon the above amendments, remarks, and papers of records, applicant believes the pending claims of the above-captioned application are in allowable form and patentable over the prior art of record. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

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Applicant believes that a three-month extension of time is necessary to make this Reply timely, and a request for such is submitted herewith. Should applicant be in error, applicant respectfully requests that the Office grant such time extension pursuant to 37 C.F.R. § 1.136(a) as necessary to make this Reply timely, and hereby authorizes the Office to charge any necessary fee or surcharge with respect to said time extension to the deposit account of the undersigned firm of attorneys, Deposit Account 03-3325.

Please direct any questions or comments to Gregory V. Bean at 607-974-2698.

Respectfully Submitted,

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Gregory V. Bean

Attorney for Applicant
Registration Number: 36,448
Corning Incorporated
Intellectual Property Department
Mail Stop: SP-TI-03-1
Corning, NY 14831
Phone: 607-974-2698

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Signature Betty L. Davis

Betty L. Davis